. . . . . DEPARTMENT OF THE ARMY PERMIT

Permittee: Cargill Salt Division

Permit No.: 19702 S98

Issuing Office: Department of the Army
San Francisco District
211 Main Street
San Francisco, California 94105-1905

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the Corps of Engineers.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: Activities including operation, repair, and new construction associated with the production and harvesting of solar salt in the southern portion of San Francisco Bay.

The following activities would be covered under this permit.

1. Repair, replacement and maintenance excavation[1]:

a) Repair and replacement of existing bay intake structures, brine control structures, and related facilities such as pumps, gates, pipelines, siphons, open channels and culverts. Removal of silt and algae. Excavated material shall be disposed in an upland disposal area unless specified otherwise in the advanced notification.

b) Excavating, clearing and retrenching of intake structures and brine conveying ditches so long as the existing configuration is not altered substantially. Excavated material shall be disposed onto levee tops above the plane of the high tide, or hauled off-site to a non-jurisdictional area.

c) Repair and replacement[1] of existing bridges, bridge foundations and abutments within the network of salt pond levees.

d) Repair or replacement of other miscellaneous items such as fences, tide gates, siphons that cross sloughs and channels, powerlines, etc., provided such repair and maintenance does not deviate from the plans of the original facility.

e) Repair of existing authorized reaches of riprap. The authorized riprap areas are designed to have a 1:1 slope (?). If additional work would alter this slope substantially, then the

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[1]. Some of the repair and replacement activities could be authorized by nationwide permit #3. For the sake of expediency and permit streamlining, they are also included here, since this permit is valid for 10 years.

proposed design should be submitted in accordance with the procedures for new work in the riprap section 2 g) below.

2. Ongoing and new work:

The following activities require site specific review and approval by the Corps of Engineers in consultation with the resource agencies pursuant to the notification procedure described in special condition 2.

a) Placement of dredged and fill material on the pond side of salt pond levees including replacement of eroded bench, below the plane of the high tide for the purpose of raising and fortifying the levees to prevent degradation (see "typical" levee drawing, figure ___). The material, either dredged mud from the salt pond or imported fill, will be placed along the inside and the top of the salt pond levee in accordance with the best management practices (BMP) referenced in special condition 1 below.

b) Dredging of existing borrow ditches within the salt ponds and placement of dredged material on existing levees. This will be performed by a clamshell or dragline on a floating dredge, usually the Mallard dredge. (?) A generalized cross section of a typical salt pond and levee system to be dredged is represented in figure ___ (*We will need some generalized scale drawings...*). The estimated areas and depths to be dredged in specific ponds will be described in the notification process described in special condition 2, and performed in accordance with the best management practices.

c) Dredging of, and placement of dredged or fill material at 38 existing dredge locks to allow the Mallard dredge to access the salt ponds. This work includes:

- dredging an access channel through salt marsh vegetation from a slough to a lock levee and breaching the levee in accordance with the BMP's;
- if the access channel is greater than 70 feet in length, temporarily sidecasting dredged material onto a preapproved area adjacent to the access cut;
- if the access channel is less than 70 feet, temporarily storing dredged material on the lock or salt pond levee, or designated (approved) stockpile area;
- breaching the salt pond levee for dredge entry into the lock and placing stockpiled material from past lock entries into the breached area to dam the lock (*Where is new breached material stored?*);
- dredging the basin within the lock and placing the material on the inside and top of the lock levees or on existing stockpile areas in accordance with the BMP's; (*depths? dimensions?*)
- (*Do we need to spell out authorization for clearing levee vegetation, depositing new dredged material, and then ultimately capping again with original vegetation that is stockpiled somewhere during this process?*)
- breaching the main salt pond levee for the dredge to enter the salt pond. Breached levee material, stockpiled atop the main levee will be used to dam the breach following entry.
- upon dredge exit, breaching and plugging levees in a similar fashion to that described above. The salt marsh muds that were excavated and sidecast in the access cut will be gathered and placed back into to the access cut, closing it behind the dredge.

Advanced notification for activities involving dredge locks shall include specific quantities of material to be dredged and placed, and drawings indicating prestaked, designated areas for

stockpiling, sidecasting and borrowing material. The use of dredged locks shall be specifically approved case by case, and follow the BMP's.

d) Dredge within sloughs, creeks and channels to allow passage of the floating dredge to access the dredge locks. Dredged material will be placed on salt pond levees where ever possible, and otherwise placed on bare mud flats following specific approval in accordance with the notification procedure.

e) Installation of new intake and brine control structures, new pumps, siphons, culverts, power transmission lines channels/ditches, crossings of channels and streams, in conjunction with new work, or relocation of existing structures.

f) Perform periodic maintenance dredging of approximately ___ cubic yards of sediment in the Redwood City loading dock area and ___ cubic yards in the Newark barge channel (??!) to facilitate navigation associated with salt production. The boundaries and dimensions of the areas to be dredged are indicated in attached figures __ and __. The destiny of the dredged material will be determined during the notification/authorization procedure. It will be disposed of at either (a) an approved Bay aquatic disposal site, or (b) within a salt pond in borrow ditches along the inside of salt pond levees, or (c) an upland location. Any disposal in the Bay will require sediment testing in accordance with the current in-Bay sediment testing protocal.

g) Place new riprap made up largely of demolition rubble (broken concrete slabs) along outboard and inboard levees as needed to fortify the slopes and prevent erosion. Approximately ___ cubic yards per linear foot of levee will be placed below the high tide line at a slope of ____ as illustrated in figure ___ attached. Riprap placed on top of salt marsh vegetation is not authorized.

h) Construct new pumping donuts, internal coffer dams, and internal salt pond levees in accordance with the notification procedure and the BMP's.

i) Construct ___ new dredge locks for the purpose of preventing the adverse impacts from using the existing ones. The new locks will be located adjacent to salt pond levees as indicated on the map in figure ___ and in the corresponding conceptual drawings, figures ___ through ___. Work associated with the construction of new dredge locks includes:

- excavating approximately____ cubic yards of salt marsh habitat covering an area of approximately ___ acres. Salt marsh vegetation will be stockpiled in the designated area illustrated in the figures.
- dredging approximately ____ cubic yards of bay mud to create the lock basin and to be placed on the excavated salt marsh mud to build the lock levees (I'm obvously guessing here...)
- (*What else?*)

Detailed maps, scale drawings and description of how and when work will be accomplished for each proposed new lock will be included in the annual notification described in condition "N" and specifically authorized prior to construction.

j) Construct islands/aritificial refugia for nesting shorebirds and clapper rails (?) when lock entry occurs during the breeding season. Specific plans and drawings will be submitted in the advanced notification.

h) Perform activities that will allow 34 acres on the Bay side of pond B-10 of an existing salt

pond to restore itself to salt marsh habitat. These activities will be defined and listed at a later time...(ideally before permit issuance).

Project Location: Activities described above will occur in San Francisco Bay and various sloughs and creeks in the cities of Hayward, Union City, Fremont, Newark, San Jose, Sunnyvale, Mountainview and Redwook City, in Alameda, Santa Clara and San Mateo Counties respectively, in California

Permit Conditions:

A. General Conditions:

1. The time limit for completing the work authorized ends in the year 2005. An extension of this permit may be granted following a written request for a time extension submitted to this office for consideration at least six months before the expiration date is reached, and pending project review by the Corps in consultation with the involved resource agencies.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

B. Special Conditions:

1. The permittee shall perform all of the activities described above in accordance with the Best Management Practices spelled out in Attachment A. Any specific exceptions to these practices

shall be addressed case by case in the Corps of Engineers concurrence following the notification procedure.

2. The permittee shall notify the Corps of Engineers (*and BCDC?*) of all activities described in Section 2 above, proposed for the upcoming annual work period from June 1 through May 31, by March 1. This formal notification will be referred to as final notification and shall include the following:

   - Complete descriptions of all proposed work described in Section 2 above. The notification shall include:
     - a regional map indicating the locks to be accessed, proposed levees to be topped, location of new facilities to be constructed or repaired, etc.
     - large scale drawings (1" = 100 ft) for each separate project in both plane and cross sectional view that indicate areas to be filled, graded, excavated or dredged, areas of temporary stockpiles and side cast, etc. These drawings should indicate tidal elevations using N.G.V.D.
     - a project description that includes estimated quantities of material to be dredged and material to be used for fill, and the estimated areal extent of the dredging and placement of fill material in square feet or acre units.
     - a description of how the work will be accomplished, including equipment required,
     - a description of the time period in which each activity is proposed to be performed.
   - A list of special status species known to be present and proposed measures to reduce and/or avoid impacts to these species, pursuant to other relavant special conditions below. This should take into consideration any data collected during surveys or other new species specific information that becomes available.
   - During the early notification period, the permittee shall stake for agency review, the lock access channel, sediment placement areas and areas proposed for stockpiles in the area of a lock proposed for use.

   No new work may commence without activity-specific written approval from the Corps of Engineers. Such concurrence should be forthcoming from the Corps of Engineers no later than May 15.

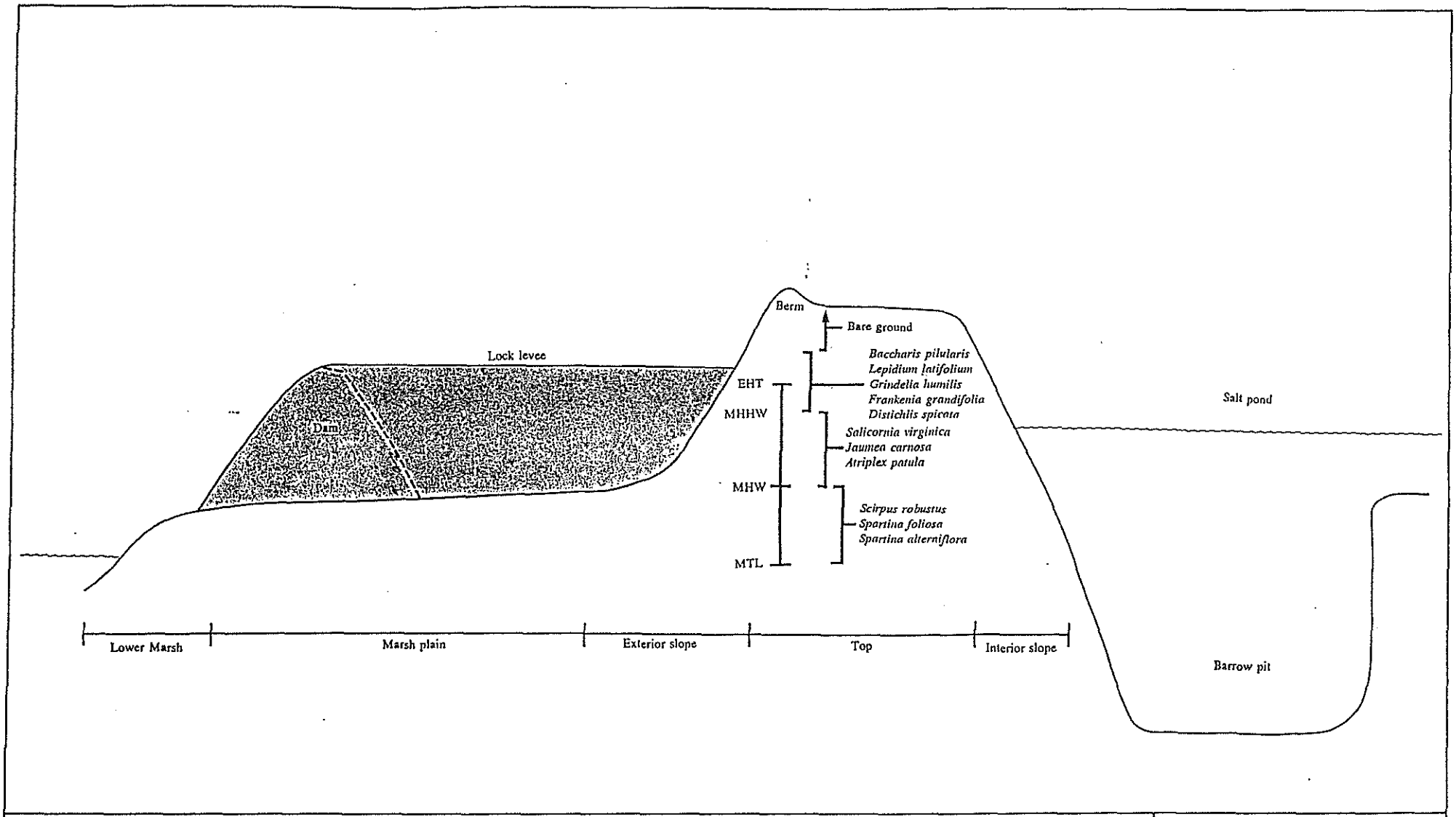
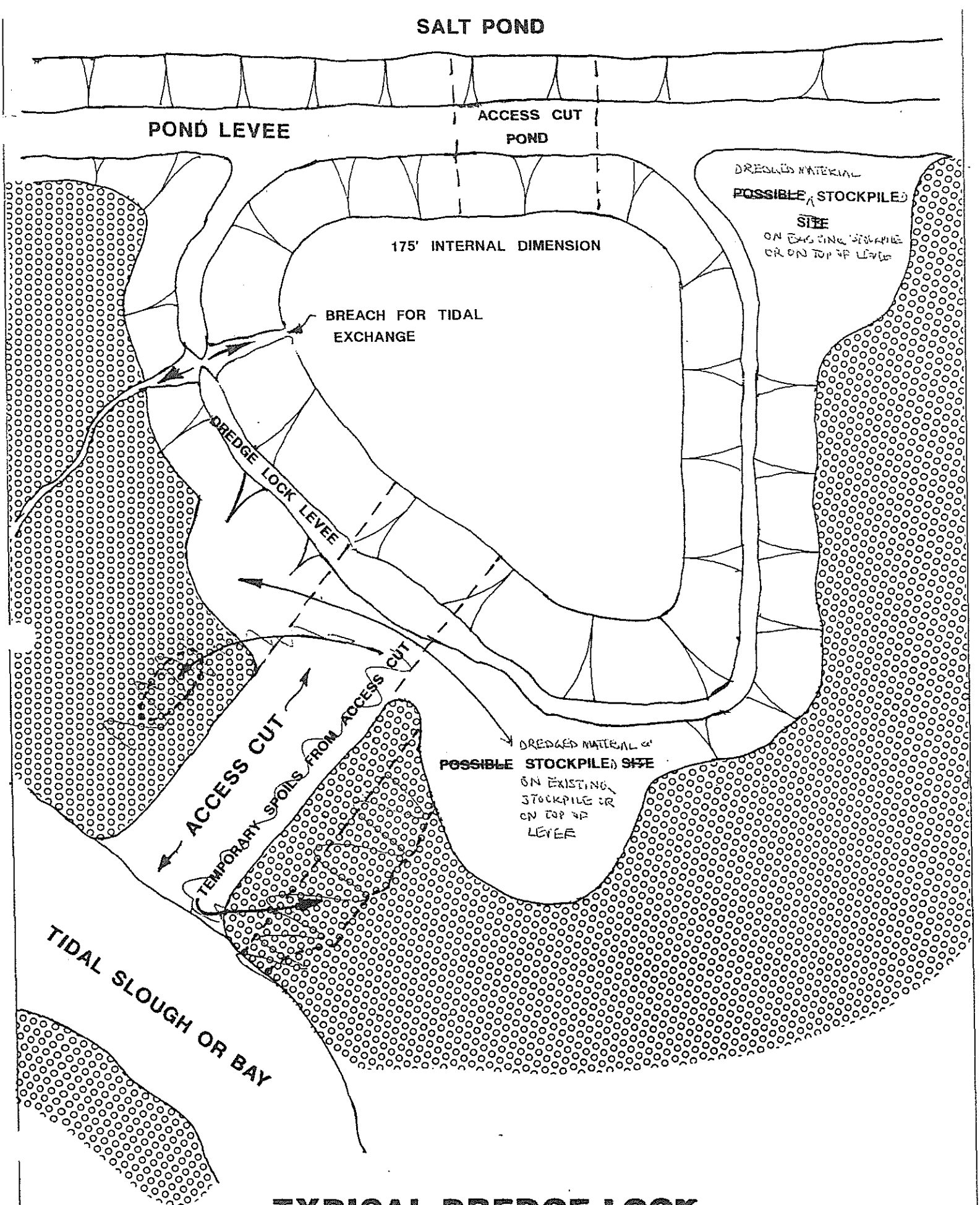


Figure 2. Cross section of salt pond, pond levee, dredge lock, and tidal marsh. Typical tidal marsh vegetation at various elevations are indicated (Josselyn 1983). Tide level codes are: EHT = extreme high tide, MHHW = mean high high water, MHW = mean high water, MTL = mean tide level.

Wetlands Research Associates, Inc.



TYPICAL DREDGE LOCK

SCALE 1"=40'

FIGURE 1